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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/606,861

06/27/2003

Lothar Goehlich

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22852

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10/06/2005

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER
LLP

901 NEW YORK AVENUE, NW
WASHINGTON, DC 20001-4413

EXAMINER

MAYO III, WILLIAM H

ART UNIT

PAPER NUMBER

2831

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/606,861

Applicant(s)

GOEHLICH, LOTHAR

Examiner

William H. Mayo III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 21, 2005 has been entered.

Drawings

2. The drawings were received on September 21, 2005. These drawings are approved.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 38-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Akiba (EP Pat Num 0341933). Akiba discloses a cable (Figs 1-2) that may having a screen

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(2) with a water sensing wire (Fig 1) for detecting leakage of electrically conductive liquids (abstract). Specifically, with respect to claim 38, Akiba discloses a water sensing wire (Fig 1) comprising an conductor (1), a water permeable insulation (4) surrounding the conductor (1, Col 2, lines 22-26), wherein the conductor (1) is formed by a plurality of wires (Fig 1) wherein the conductor (1) is formed by a plurality of wires (Fig 1) having air cavities between the plurality of metal wires (Fig 1) which would inherently allow the cross-sectional shape of the conductor (1) to change when a radial pressure is applied to the insulation, wherein one or more polymer filaments (i.e. braided polyester fabric) are contained as reinforcement inside the water permeable insulation (4, Col 2, lines 22-26). . With respect to claim 39, Akiba discloses a water sensing wire (Fig 1) for usage as a cable comprising an conductor (1), a water permeable insulation (4) surrounding the conductor (1, Col 2, lines 22-26), wherein the conductor inherently comprises a variable deformation cross section during application of radial stress (i.e. since Akiba discloses the same structure, then it must inherent exhibit the same characteristics as the claimed structure), wherein one or more polymer filaments (i.e. braided polyester fabric) are contained as reinforcement inside the water permeable insulation (4, Col 2, lines 22-26).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 20-37 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akiba (EP Pat Num 0341933) in view of Applicant's Own Admission of Prior Art (herein referred to as AOAPA). Akiba discloses a cable (Figs 1-2) that may having a screen (2) with a water sensing wire (Fig 1) for detecting leakage of electrically conductive liquids (abstract) as disclosed above. Specifically, with respect to claim 20, Akiba discloses a water sensing wire (Fig 1) comprising an conductor (1), a water permeable insulation (4) surrounding the conductor (1, Col 2; lines 22-26), wherein the conductor (1) is formed by a plurality of wires (Fig 1) having air cavities between the plurality of metal wires (Fig 1) which would inherently allow the cross-sectional shape of the conductor (1) to change when a radial pressure is applied to the insulation. With respect to claim 21, Akiba discloses that the plurality of wires (1) is stranded to a predetermined length of pitch and direction of pitch (Col 1, lines 8-11). With respect to claim 22, Akiba discloses that the conductor (1) is configured as a Litz wire (Fig 1). With respect to claim 23, Akiba discloses that one or more polymer filaments (i.e. braided polyester fabric) are contained as reinforcement inside the water permeable insulation (4, Col 2, lines 22-26). With respect to claim 24, Akiba discloses that the polymer filaments (i.e. braided polyester fabric) are parallel to the conductor (1, Fig 1). With respect to claim 25, Akiba discloses that the water permeable insulation (4) is an insulating braiding (i.e. braided polyester, Col 2, lines 22-26). With respect to claim 28, Akiba discloses that the water permeable insulation (4) is an insulating braiding made of braided polyester (Col 2, lines 22-26). With respect to claim 29, Akiba discloses that the

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polymer filaments (4, i.e. polyester braids) and the conductor (1) inherently have an elasticity module such that up to a limit force at which an elastic deformation of the polymer filaments (4, i.e. polyester braids) changes into a plastic deformation, only an elastic deformation is applied to the conductor (1, i.e. since Akiba discloses the same structure, then it must inherent exhibit the same characteristics as the claimed structure). With respect to claim 31, Akiba discloses a water sensing wire (Fig 1) comprising an conductor (1), a water permeable insulation (4) surrounding the conductor (1, Col 2, lines 22-26), wherein the conductor inherently comprises a variable deformation cross section during application of radial stress (i.e. since Akiba discloses the same structure, then it must inherent exhibit the same characteristics as the claimed structure). With respect to claims 32-33, Akiba discloses that the conductor (1) is formed of a plurality of wires having air cavities therebetween (Fig 1). With respect to claims 34-36, Akiba discloses that the plurality of reinforcement filaments (i.e. polyester braids) is provided inside the insulation (4, Fig 1). With respect to claim 37^{34, 35, or 36,} Akiba discloses that the metal wires (1) and the reinforcement filaments (4) are arranged such that air cavities are formed therebetween the wires (1) and the filaments (4, Fig 1). With respect to claims 40-41, Akiba discloses a water sensing wire (Fig 1) comprising an conductor (1), a water permeable insulation (4) surrounding the conductor (1, Col 2, lines 22-26), and one or more polymer filaments (i.e. braided polyester fabric) are contained as reinforcement inside the water permeable insulation (4, Col 2, lines 22-26).

However, Akiba doesn't specifically state the screen of the cable comprising water sensing wires (claims 20 & 31), nor the conductor comprising copper (claim 26), nor the polymer filaments being Aramid® or Kelvar® (claim 27), nor the cable being a power cable (claim 30), nor the conductor being a solid conductor (claims 40-41).

AOAPA teaches typical power cables (Figs 4-6) comprise water-sensing wires in order to detect water intrusion (Page 2, paragraph 2). Specifically, with respect to claim 20, AOAPA teaches a cable (Fig 4) comprising a screen layer (PSC), wherein the screen layer (PSC) comprises two water-sensing wires (WSW). With respect to claim 26, AOAPA teaches that the typical power cable (PCA) comprises a central conductor (PC), wherein the conductor (PC) is typically made of copper (Page 2, line 4). With respect to claim 27, AOAPA discloses that the power cable (PCA) made comprise Aramid® or Kelvar® materials which are known and commercially available insulating materials (Pages 8-9, 3rd paragraph, lines 1-3 and 1st paragraph, lines 1-2). With respect to claim 30, AOAPA discloses that the cable (PCA) is a power cable (Page 2, paragraph 2). With respect to claim 31, AOAPA teaches a cable (Fig 4) comprising a screen layer (PSC), wherein the screen layer (PSC) comprises two water-sensing wires (WSW). With respect to claims 40-41, AOAPA discloses that the conductor (WC) is a solid conductor (Fig 4).

With respect to claims 26, 31, and 40-41, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the cable of Akiba to comprise the conductor configuration as taught by AOAPA because AOAPA teaches that such a configuration is a typical configuration in order to detect

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water intrusion in the cable (Page 2, paragraph 2) and since it is known that copper is a superior conductor for transmitting signals and a solid conductor provides a cable with rigidity.

With respect to claim 27, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the cable of Akiba to comprise the insulation polymer filament configuration as taught by AOAPA because AOAPA teaches that such materials are known as insulators and commercially available and since it has been held to be within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

With respect to claim 30, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the cable of Akiba to be utilized as a power cable are taught by AOAPA, because AOAPA teaches that such a configuration is a typical configuration in order to detect water intrusion in the cable (Page 2, paragraph 2) and since it has been held that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Response to Arguments

7. Applicant's arguments filed September 21, 2005 have been fully considered but they are not persuasive. The applicant argues the following:

- A) Akiba doesn't disclose air cavities between a plurality of metal wires and therefore cannot anticipate the claimed invention.
- B) Akiba doesn't disclose the metal screen comprising a water sensing wire and therefore cannot anticipate the claimed invention.
- C) Akiba doesn't disclose a variable deformable cross section during the application of radial stress and therefore cannot anticipate the claimed invention.

With respect to argument A, the examiner respectfully traverses. Clearly, Akiba illustrates in the drawings, the conductors having air cavities between the stranded conductors. Since it appears that the drawings reasonably disclose conductors having air cavities between the stranded conductors, the property of being able to have a variable cross section upon the application of radial force is an inherent property because all of the structure is disclosed. It has been held that the drawings must be evaluated for what they reasonably disclose and suggest to one of ordinary skill in the art. In re Aslanian, 590 F. 2d 911, 200 USPQ 500 (CCPA 1979). In this case, clearly as illustrated, conductors having round cross sections, would have to leave air pockets between each other because the overall surfaces touching is not the whole surface. Therefore, Akiba clearly discloses the conductors having air pockets between the conductors.

With respect to argument B, the examiner respectfully submits that this argument is moot in view of the new rejection.

With respect to argument C, the examiner respectfully traverses. Firstly, it must be stated that Akiba clearly discloses all of the claimed structure cited in claims 38-39. It has been held that were there is no structure different between the claimed invention and the prior art, then all of the claimed properties of the claimed invention are also inherent in the prior art structure. Specifically, MPEP 2112.01 [R-2] states

>I. < PRODUCT AND APPARATUS CLAIMS — WHEN THE STRUCTURE
RECITED IN THE REFERENCE IS SUBSTANTIALLY IDENTICAL TO THAT
OF THE CLAIMS, CLAIMED PROPERTIES OR FUNCTIONS ARE
PRESUMED TO BE INHERENT

Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established.

In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 562 F.2d at 1255, 195 USPQ at 433. See also Titanium Metals Corp. v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (Claims were directed to a titanium alloy containing 0.2-0.4% Mo and 0.6-0.9% Ni having corrosion resistance. A Russian article disclosed a titanium alloy containing 0.25% Mo and 0.75% Ni but was silent as to corrosion resistance. The Federal Circuit held that the claim was anticipated because the percentages of Mo and

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Ni were squarely within the claimed ranges. The court went on to say that it was immaterial what properties the alloys had or who discovered the properties because the composition is the same and thus must necessarily exhibit the properties.).

See also *In re Ludtke*, 441 F.2d 660, 169 USPQ 563 (CCPA 1971) (Claim 1 was directed to a parachute canopy having concentric circumferential panels radially separated from each other by radially extending tie lines. The panels were separated "such that the critical velocity of each successively larger panel will be less than the critical velocity of the previous panel, whereby said parachute will sequentially open and thus gradually decelerate." The court found that the claim was anticipated by Menget. Menget taught a parachute having three circumferential panels separated by tie lines. The court upheld the rejection finding that applicant had failed to show that Menget did not possess the functional characteristics of the claims.); *Northam Warren Corp. v. D. F. Newfield Co.*, 7 F. Supp. 773, 22 USPQ 313 (E.D.N.Y. 1934) (A patent to a pencil for cleaning fingernails was held invalid because a pencil of the same structure for writing was found in the prior art.)

Therefore, unless the applicant is stating that additional structure is responsible for the claimed property, the 35 USC 102(b) rejection is proper and just. If there is additional structure responsible for the claimed properties, then the applicant should incorporate that structure in the claims.

Communication

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (571)-

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272-1978. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William H. Mayo III
Primary Examiner
Art Unit 2831

WHM III
September 30, 2005